Alexander Johannesson

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Objective

Seeking a co-op/internship in tech with strong full-stack fundamentals and hands-on experience designing and supporting data-driven systems. Proficient with React/Next.js and Node.js, and experienced in building reliable pipelines between applications, APIs, and databases.

Available: From December 2025

Education

Bachelor of Computer Science   **Expected: April 2026**

Rochester Institute of Technology • Rochester, NY
GPA: 3.02

Skills

Technologies/Frameworks: React.js, Next.js, Node.js, Tailwind CSS, REST, GraphQL, Postgres, MongoDB, mySQL Git, Docker, AWS, Apache, Django

Languages: JavaScript/TypeScript, Python, Java, C#, C++, HTML5, CSS3, MATLAB

Projects

MemSum Enhancements(Extraction Text Summarization Model)   **January 2024 - May 2024**

https://github.com/Glockosu/MemSum-Enhancements

- Spearheaded the advancement of the MemSum model, focusing on integrating semantic analysis with Local Sentence Encoder (LSE) and Global Context Encoder (GCE), employing pre-trained GloVe embeddings for sophisticated text representation.
- Formulated a dynamic post-processing approach using TF-IDF vectorization and n-gram blocking to significantly reduce redundancy and improve summary coherence.
- Directed the enhancement of neural network configurations, including LSTM and GNNs, to refine the model's ability to discern and prioritize essential information in text summarization.
- Collaborated closely with team members to ensure seamless integration and optimal functionality of frontend and backend systems, enhancing the model's operational efficiency and output quality.

TypoJam   **December 2024 - present**

https://github.com/TypoJam

- Building TypoJam, a full-stack rhythm game platform with a large-scale database backend powering beatmaps, rankings, user profiles, submissions, and verification workflows.
- Designed and implemented performance/rating systems and other core algorithms (scoring, difficulty, progression, and leaderboard logic) to support competitive play and meaningful stat tracking.
- Developed and deployed the public-facing website and supporting services, including account/profile features, data pipelines, and APIs to reliably serve real-time game and community data.
- Engineered scalable async data handling and validation across services to keep interactions responsive, accurate, and consistent as the dataset and active users grow.

Terrain Modeling(Perlin Noise & Fractals)   **August 2023 - November 2023**

https://people.rit.edu/arj6153/finalProjectCS716/index.html

- A sophisticated terrain modeling application utilizing Perlin Noise and fractals to generate realistic 3D landscapes, enhancing the visual and interactive experience in simulations and games.
- Incorporated Dynamic Level of Detail (LOD) management, allowing for real-time updates and rendering of terrain with optimized performance and reduced computational overhead.
- Engineered a custom terrain class and chunk generation system, enabling efficient management and display of large-scale terrains by dynamically loading and unloading terrain chunks.
- Designed and coded seed, fade, and lerp functions to produce more natural terrain transitions, contributing to the realism of the modeled environments.

Work Experience

Front-End Engineer   **April 2019 - September 2019**

CybernetNY / Long Beach, NY

- Designed and developed highly responsive user interface components using React.js with Tailwind.
- Implemented SEO best practices and optimizations across multiple web projects increasing traffic to various sites.
- Collaborated closely with cross-functional teams, including UX/UI designers, backend developers, and project managers.